

THE SOCIETY FOR THE ADVANCEMENT OF MANAGEMENT JOURNAL *

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Comment

MR. LEISERSON clearly sets forth some of the underlying causes of the passage of some of our present legislation and points out that the same causes are hindering industry's adjustment to this same legislation. He rightly points out that many of the faults found with employers and employers' groups are to be found also in the employees' organizations. Awareness of the trend on the part both of industry and labor will aid us in the future to avoid making similar mistakes.

The role of administration and the principles underlying its effective operation are still the *terra incognita* of management thinking. Mr. Coil advances our knowledge of the whole administrative process by a formulation of unprecedented clarity, precision and realistic usefulness. It is hardly too much to say that from this time forward thinking in this field will necessarily have to build upon the solid foundation which this article supplies.

Mr. Fellows' thoughtful analysis of standards of efficiency in government is as significant for its source as for its content. For here we have an instance of an executive with engineering training coming out of conventional business practice, who out of the sheer logic of his own participation in governmental administrative work has come to lay great stress upon the importance of non-pecuniary standards in organization. He correctly points out that there is room for much exploration in the whole field of setting up valid standards and defining a concept for efficiency in organizations like governmental bodies where conventional accounting standards can only partially apply.

Mr. Carroll's paper represents a substantial contribution in the time study field. Its consideration of the uses of time study for control purposes is supported by his excellent analysis of new methods. The paper breaks new ground and will be indispensable reading for every practitioner in this field.

With equal skill, Mr. Kennedy elaborates a wholly different function of staff management responsibility. He sets forth clearly the several differing areas of industry in which the several types of market research have to be employed. He presents the subtle elements in the problem and makes clear the extent to which intuitive factors have to supplement statistical or the objective devices of measure. As a realistic plea for more attention to the development of this staff function under trained direction, this paper is eloquent and persuasive.

The President's Annual Report

By WILLIAM H. GESELL

Vice President, Lehn & Fink, Inc., Bloomfield, N. J.

Presented at the Annual Business Meeting of The Society for the Advancement of Management, December 8, 1938

I HAVE written my report as President this year because I think that the present time is one of significance in the Society's history.

This annual conference marks the end of the second full year and is the third conference of the Society under its present name and set-up.

The annual conference in 1936 was the first. The organization had just been effected in February of that year. Some of our members still felt that the combination of the two societies (the Taylor Society and The Society of Industrial Engineers) was a mistake. Certain Chapters insisted upon keeping old names. Some dissatisfactions with one or the other of the old societies hung over the new organization. There were innumerable details to be straightened out, differences to be adjusted and a clean-cut organization to be developed.

At this point I feel I must pause to pay tribute to Ordway Tead who had the thankless job of presidency at that time. His leadership, foresight and integrity carried the new Society through a period of the most trying circumstances and he laid the foundation for a strong and valuable organization.

The first full year of our activity, terminating in the second annual conference, December 1937, found us with 735 regular members, 65 company representatives and 357 student members in 8 chapters, two foreign branches and 15 student branches, as well as those not in organized groups scattered over 34 states and 25 countries including, Australia, New Zealand, South Africa, South American countries, The Philippines, China and Japan.

This year we have increased our membership to 960 regular members, 94 company representatives and 494 students in 12 chapters, 21 student branches and two foreign branches. This represents a gain of 225 regular members, 29 company representatives and 137 students.

We have developed four new chapters (Cincinnati, Milwaukee, Toledo and Omaha) and six new student

branches (Iowa State College, Louisiana State University, University of Minnesota, Montana State College, Oklahoma Agricultural & Mechanical College and University of Pittsburgh). We have new members in the South American countries with indications of many more. We have added Turkey to our list of countries covered, and Montana, Nebraska and Oklahoma to our states.

Besides these actual numerical gains in membership the Society faces the new year in a more strengthened position because of the more whole-hearted support being given it by the established chapters and older members.

Regional conferences, sponsored by chapters, have already been held in Philadelphia and Boston and one is planned for Chicago on April 21 and 22, 1939. The Washington Chapter played host to the Society during the Seventh International Management Congress.

The individual chapters are adding to their activities and we are beginning to see some order in the various divisions of special interest.

I think I should explain how it is expected these divisions will work so that members may fit themselves into the groups that interest them. There are nineteen divisions dealing with special management problems.

Each division is headed by a vice president who is appointed by the President with the approval of the board of directors. The vice presidents are chosen from among men known to be experts in the field. These men encourage the chapters to set up committees and we expect gradually to work out a national program in each division which the chapters may follow if they choose.

One point should here be made clear, and that is that chapters and branches of SAM are expected to conduct themselves as autonomous groups. Only the briefest organization rules have been made nationally so that the various groups may be able to develop in the manner best suited to the locality.

In addition to the divisional vice presidents there are eight operating vice presidents taking care of such problems as regional development, membership, chapter organization, student branch organization, international co-operation, etc.

The 2¼ year period just ended was one of trying to find the proper organization set-up best suited to our needs and several amendments to the by-laws were voted upon until we now have what I believe to be a working and democratic arrangement. For the benefit of those members who do not know how we operate I shall briefly sketch an outline.

One of the problems in a society of this nature is to have sufficient representation from all of the various interests within it—intellectually and geographically. The new method of electing directors (having one from each chapter) will, we hope take care of the geographical problem and also the problem of an expanding group.

Having a vice president to represent each of the special divisions—from time study and purchasing to policy administration—gives each management problem ITS due weight.

You will recognize that we have two main types of members—those interested in the technical phases of management and those interested in the administrative phases.

Also, I think that of all the management societies ours is unique in this next respect, we have a group interested and articulate in the philosophy of management and in its economic implications.

Therefore, the importance of each division of special interest is recognized by having its chairman appointed a vice president of the Society.

We have, as I said before, the directors from chapters, the divisional vice presidents, the functional vice presidents and in addition four officers elected from the membership at large to fill the positions of President, Vice President, Secretary and Treasurer. These four officers are also directors representing those members not in chapters. These four groups, together with the presidents of the chapters form the executive council of the Society.

There is another group called the advisory council composed of all past officers. The value of having such a group cannot be overemphasized because of the experience and interest in Society affairs that these members have.

According to the by-laws the board (composed of all the directors and four elected officers) meets but twice

a year. In order to carry on the executive work between board meetings the president and two members of the board are appointed as an executive committee. This committee meets monthly to carry on the executive work of the Society.

All members of the executive council and advisory council receive invitations to meetings of the executive committee and also receive reports of the executive committee's meetings and actions for purpose of information, review, suggestions and advice.

During this last year an average of fifteen members attended each meeting. All who attend have a voice in the making of decisions and reports of these meetings are sent to all the officers.

Thus we have been endeavoring to have a wide participation in and circulation of the results of executive action so as to eliminate the danger or any domination by one or another group.

I have gone into all this detail because we have had inquiries concerning the "how" of the Society's operation and feel that it should be on record for future reference.

Now with regard to expenses. If you will consult the statements before you, you will observe that the Society ended its fiscal year at September 30, 1938, with an accumulated deficit of \$2,867.02. This is due to a conscious effort on our part to meet all the demands for services, development of activities and promotional effort in a drive for increased income through more membership. We have an increased membership as you have already been told and new members are coming in at the rate of one a day. However, the cost of getting these new members has been high and we do not expect to reach the break-even point until we have 1300 regular members.

Excluding students it costs the national society about \$10.00 a year to serve each member—and the average income for the national society (after rebates to chapters) is \$7.00. Since a large portion of this expense is for publications and office services which will lower unit cost with increased coverage we can safely look forward to a lowering of deficit for the coming year and if our present rate of membership increase continues—to wiping it out by September 30, 1940.

I have felt that we would lose all we gained so far if we curtailed any of our activities in these formative years. Now, however, certain of our projects which show promise of becoming valuable will be continued and others will be dropped until we have reached the

point where we are carrying only those required by the membership.

Our chief problem just ahead therefore is to strike an effective balance between the demands for increased activity on the one hand and curtailment on the other.

Another important problem is the one of membership grades. Opinion is divided between those who would have a rigid structure with "senior" grade carrying a professional status, and those who would have a loose structure of merely members and students or juniors. Since this also involves the problem of office detail and expense it is important that a good deal of study be made before any proposal for change is put forth—a committee is studying this.

Since we are a Society which proposes to A D - V A N C E the science of management (a concept implying our educational role) members join for two purposes (1) to learn, to study, to discuss management for their own benefit and improvement and (2) to contribute to an organization which has for its aims the development of the science of management to the end that all groups within the economic structure will benefit.

For this reason we have an office and staff, which, in addition to carrying on the details of operation, acts as a clearing house, through its library and files, for management information. Distinguished foreign visitors come to us for introductions to American management experts, company visits and even the arrangement of their itineraries. Research people use information that is available only in our files, we aid students in choosing courses of study, we make contacts between employers and those seeking jobs and we co-operate with other organizations with an interchange of information, meeting notices, etc.

I am trying to cover in this report three main points:

What we are, what we have done and what we propose to do.

The year ahead is one in which we must endeavor to iron out all those little wrinkles of organization in order to have an efficient, smooth and dynamic group. What has gone before gives us the material for the establishment of policies, the undertaking of various programs and for the development of the Society as a whole.

We have several excellent tools with which to work. The Publications have been getting better and better. The JOURNAL is considered to be outstanding in the field and we are continuously working on our supplementary publications to improve and develop them. After we wipe out the deficit we can spend any additional income to good advantage in this direction.

The various awards and prizes form another effective tool. We have the Harrington Emerson Trophy for chapter development, The George T. Trundle, Jr., Trophy for student branch development, the Taylor Keys for individual member effort, the R. I. Rees Prize for individual student effort and the Gilbreth Medal for contributions to the field of industrial engineering and management.

The past several years have been a period of experiment in methods of determining the basis for making the various awards. We are ironing out these wrinkles gradually so that they will all serve a useful purpose.

Suggestions from members are always welcome—and more, they are carefully considered. Indeed some of the things we have been doing (including some we have discarded since) were the direct result of member inspiration.

The voluminous daily mail is a healthy sign and I feel confident that we are going forward to a better and bigger Society.

Reserve these dates on your calendar

Spring Regional Conference

Chicago, April 21-22, 1939

Industry's Adjustment to Recent Labor Legislation

By WILLIAM M. LEISERSON

Chairman, National Mediation Board, Washington, D. C.

Address Presented at the Annual Dinner of The Society for the Advancement of Management, December 8, 1938.

THE only thing that can be said positively about the process of adjusting industry to recent labor legislation is what The Society for the Advancement of Management stands for; i.e., scientific management, although I prefer to call it science in management. I think the problem of adjustment is indeed a serious one. No one knows the solution; there is no ready answer. I can only point out a method of approach. In my judgment, the only way to approach the problem is in the scientific way.

Managers have learned to apply the scientific method to materials and machines, but as soon as they come to human beings they stop; they think the method is not applicable. Anyway, it does not seem to work. Yet it is in the application to the management of human labor that the use of scientific methods is needed more than anywhere else; not the methods of the natural sciences but of the social sciences. These must be based largely on psychology, social psychology. Such scientific methods cannot be very exact, but if we approach the problems of adjustment in this way I think they can be worked out satisfactorily.

May I illustrate briefly the method of approach that I think it is necessary for both industry and labor to adopt with respect to the new labor legislation.

The first thing to realize is that the problems which industry must face because of the recent labor legislation have not been spontaneously generated by the New Deal Era. We know from our biology that all life comes from previous life. Similarly, every problem now facing industry springs from and is a development of previous problems. Each of the present-day problems has a past; it has ancestors; and there is no way of intelligently adjusting industry to the new situation brought on by the recent labor legislation without knowing the past and tracing out the ancestors of the present-day problems.

To illustrate the method of tracing ancestral problems, we may begin with the period of prosperity dating from 1922 to 1929. During this period all the indexes of business activity were moving upward; production went up, wealth increased, there was a growth in savings, securities rose in value. Every business index showed an upward growth, although prices increased but slightly. One index, however, moved quite in the opposite direction during this period—that was employment. While prosperity was increasing employment of wage earners was steadily decreasing. You may remember that in 1927 the newspapers noted a new phenomenon; unemployment in prosperity. There was a good deal of discussion at the time about unemployment in the past having been a phenomenon of depression, and how it had changed to become an accompaniment of prosperity.

Had we noted at that time the significance of the fact of declining employment with increasing prosperity we might have seen perhaps the most important of the underlying causes of our present difficulties. The causes of the present problems of industry and labor must be sought in this background of increasing unemployment during the prosperity of the twenties.

A group of people with whom I was associated in Ohio at that time sensed that this increasing unemployment in prosperity might lead to disaster. We, therefore, drafted an unemployment insurance bill which was introduced in the Ohio Legislature. We had a rather crude argument for the bill at that time. The corporations, we said, have built up surpluses out of which they paid dividends when their businesses were not earning dividends. Why not similarly lay aside funds to pay working people some income when they are unemployed through no fault of their own. Also we argued that if an insurance fund could be built up from which to provide some income for the unemployed, their purchas-

ing power would be maintained, and this would provide a cushion against a fall of business activity.

The Ohio Chamber of Commerce and the Ohio Manufacturers' Association vigorously opposed the bill and ridiculed our arguments. They said we wanted to pay a dole to the unemployed as England was doing with disastrous results, they thought. We were also charged with advocating other alien ideas to supplant the American system of neighborly charity, which had proved so successful in dealing with such problems in this country. Most vehemently they objected to state unemployment insurance on the ground that it would throw the whole problem of unemployment relief into politics. Charity or a do-nothing policy, they assumed, would keep politics and politicians out of the unemployment problem.

We tried to reason with those who represented the Manufacturers' Association and the Chamber of Commerce. We said to them: "What do you think these people are going to do—sit around and starve waiting for business to come back? They will, of course, go to their Legislators and Congressmen for relief, and thus throw the whole problem into politics. You are forcing the unemployed into politics by your do-nothing policy. You can help solve the problem in an intelligent way if you support a definite system of setting up reserve or insurance funds from which the unemployed can secure enough income to keep body and soul together until work becomes available for them." We told them that we were not sure that our bill proposed the best way of handling the problem but we asked them to join us and help work out a better way. They steadfastly refused.

Now we know that they did not keep the problem of unemployment relief out of politics by refusing to face it. They missed their opportunity, and it is not for business men who acted as they did to complain now about politics in relief and about the burdens of the Social Security Act.

Let us turn now to another significant development of the nineteen twenties by which employers, if they had been alert, might have avoided many of the headaches that they are now having. During this period you will remember that there was a great development of personnel work throughout our industries. Welfare work of various kinds was developed and all sorts of social services were installed in industrial plants, hiring and discipline methods were improved, training programs were installed, labor turnover was reduced, arbitrary discharges by foremen abolished. Industry was doing a fine job of personnel management. It even recognized

that employes ought to have a voice in determining conditions of employment and it developed representation plans of various kinds to meet this need. There was a kind of competition for leadership of labor in this movement. Personnel managers and union leaders were competing for the support of labor, and the personnel managers were winning out. Employers often referred to their personnel and welfare department as "square deal departments" to assure their employes a square deal in dealing with the management.

That the personnel managers were winning out in this competition is evident from the fact that labor union membership not only failed to increase during the period of the twenties but even showed a decline. This was a reversal of the normal experience. Usually, trade union membership declined in depression and increased during prosperous periods. For the first time in the history of the country union membership did not increase during a prosperity period. Evidently the working people had faith in the promises of the "square deal departments"; they were willing to follow the leadership of the personnel managers.

But when the depression came, industry taught the working people that its promises of a square deal did not mean anything. Employers beset by their own problems forgot their promises to their employes and the principles of personnel management that they had taught. They threw thousands of their employes out into the streets and let them shift for themselves. But when one employer was laying off employes he was laying off another employer's customers. Thus all employers were adding to the army of unemployed. Those laid off could find no other work; there was no income for them and their families, and they drifted to the bread lines. What the employers were doing in their efforts to keep solvent was to throw their employes on the communities for support, and thus local and state and federal governments were put in the red.

In addition to laying people off, industry cut wages of those whom they retained in employment. This was inevitable of course. But the manner in which they cut wages was not inevitable, and it contradicted the policies of sound management that employes had been taught to believe. One corporation after another announced wage cuts without consulting its employes, and in many cases such cuts were made several times. The corporations merely announced that they regretted to have to cut wages ten or fifteen per cent, or whatever the amount was.

But in contrast with this policy working people saw what happened in the railroad industry where collective bargaining prevailed, that is to say, where the employees were really partners in the industry. Instead of treating the labor partners as if they had no rights in the matter, the railroads served a formal request on their employees that they would like to confer with the employees' representatives in order to secure a wage cut that they considered necessary. There were conferences over a period of time, and the employees' representatives asked some embarrassing questions. They were willing, they said, to take a wage cut if the money thus saved would be used for providing or maintaining employment. They were not willing to have their wages cut in order to provide a "dole for idle capital." Finally a ten per cent wage cut was agreed upon.

The contrast between this method of cutting wages and the method used in the industries where the employees were unorganized was not lost upon the employees. They read the newspapers and they learned that if they wanted their rights properly considered by management in matters affecting their wages they would have to organize and bargain collectively. This experience, together with the experiences in handling unemployment and relief, you can see, taught the working people many lessons. Had industrial managers done any real thinking about these matters at the time, they would have known that the working people of this country would never be the same after such experiences. Whether prosperity was just around the corner or whether the depression continued for years to come, the wage earners would take the first opportunity to change the rules of the game that prevailed in industrial life.

All of this the managers of our industrial enterprises should have known, but they acted as if they were not aware of it. They did little or nothing to meet the needs and the thinking of the working people of the country; and they opposed action by the Government that was advocated by labor organizations. The farmers of the country were in pretty much the same position as the industrial wage earners, so when the opportunity came in the presidential election of 1932, the industrial workers and the farmers united to repudiate both the Hoover administration and the "do-nothing" policy of industrial management which it reflected. They supported the New Deal promised by Franklin Roosevelt; but it would not have made any difference what other platform had been presented to them. It was inevitable that they should repudiate the leaders of government and industry whom they held responsible for reducing them to the

condition in which they found themselves in 1932. They had to have a new deal of some kind.

When the new Congress met in 1933 it knew that something had to be done about industry. It had a mandate to act and not to wait for prosperity to turn the corner by the operation of so-called natural economic laws. But Congress and the new Administration were not radical. They did not want to rush headlong into a policy of substituting government management for private management of industry. When the banks were closed down the Government might have taken over the whole banking and credit system of the country as it was urged to do by some. It refrained from doing this. In the field of industry it might have enacted laws directly regulating labor relations, wages and working conditions, but it proceeded with caution, even though the need for a radical change in industrial policy was great. Instead it offered to industry an opportunity to regulate itself and to establish some minimum standards of fair dealing with labor. That was the N. R. A.

The N. R. A. represented the biggest management opportunity that industry ever had, I think. What the Government in effect said to the industrial managers was this: "You folks who are responsible for the management of industry have made a terrible mess of it. But instead of the Government passing a lot of laws telling you what you should do and fixing your wages and working conditions, we will give you an opportunity to make your own laws. You can formulate your own codes establishing fair practices in industry, and the Government will see to it that the minority of recalcitrant employers shall be governed by these fair practices." That was a chance for industry to write its own ticket.

Organized labor, of course, was fearful of this arrangement and it insisted on certain minimum standards for labor and on the right to organize. Congress recognized the justice of these demands, but instead of enacting definite statutes regulating labor relations it merely stipulated that every industrial code formulated by management shall include provisions establishing minimum rates of pay and maximum hours of employment and guaranteeing the right of employees to organize and bargain collectively. It gave industry an opportunity to govern itself in labor relations as well as in trade practices; and it asked only that in exercising this authority management should set decent minimum standards for labor and allow working people to have some voice in determining labor conditions.

Industrial management muffed this great opportunity.

I think this was management's greatest failure. For the excesses of the nineteen twenties and the industrial depression we were all responsible more or less. But when the industrial leaders were given the opportunity to re-establish themselves in the confidence of the people of the country by putting their own houses in order, and then they flopped, that was indeed a tragic failure.

What were the reasons for the failure? I think there were two. The industrial leaders could not learn to think in terms of their industries as a whole or of the country as a whole. Their views and their actions were limited by their own particular businesses. Consequently, they were unwilling to permit their employees to exercise the same right of associating themselves in organizations that they themselves enjoyed. They feared that labor organizations would encroach upon management rights and therefore they did not want their employees to organize unless they could control the organizations. They insisted on encroaching on the employees' right while objecting to any encroachment on their rights.

This, of course, is all too brief an explanation. But for the purpose here I think it is sufficient to explain the fatal mistake that industrial management made. Industry by the policy it followed forced working people to turn to the Government for legislative action to meet their needs and to protect their rights. It never pays industry to act in a manner that compels employees to turn to politics and to use their votes to get what they think they are entitled to in the way of wages, conditions and treatment from their employers. Even though the things the employees ask may be very costly and may appear to infringe on what the management considers to be its rights, it will cost the management more and will result in greater interference with its prerogatives if the employees must get by government legislation what they think they are entitled to from industry.

This does not mean that they must grant all requests or unreasonable requests. But if the demands made upon them by their employees are such as to arouse public sympathy, then they are best advised to work out reasonable compromises by bargaining with representatives of their employees rather than to have Congress or the state legislatures make the compromises for them. For, the legislative compromise is not likely to be as favorable to employers as they can work out by bargaining collectively with their employees.

If employers oppose industrial adjustments and changes that working people consider vital to their needs, they must know from experiences now that the

employees will decide that if they cannot get the improvements in their conditions directly from industry they will have to get them through political action by legislation. When this happens industry is lost, because in collective bargaining, however distasteful this may be to the employer, he and the union of his employees each has one vote; they are equal bargainers. But when the employees go into politics then they may have a hundred votes for each vote that the employer has.

There would have been no need in this country for the Wagner Labor Relations Act if employers had learned this lesson. You do not find the counterpart of the Wagner Act in most of the European countries even where the labor organizations are very powerful. England does not have it though it has powerful unions. Why do they not have such a law? Because it did not occur to the great body of England's employers that they had the right to deny their employees the privilege of associating themselves in labor organizations when they, themselves, were organized in business and employers' associations of various kinds. They did not think it was proper for them to try to destroy labor unions by discharging active members, spying upon them, or otherwise hurting employees who joined labor unions. Had employers honored the organization rights of their employees voluntarily, there would have been no need for the Wagner Act to guarantee those rights, and I doubt if Congress would have adopted any such Act, or if organized labor would have advocated it.

Now that we have this Law, it is necessary for industrial management to adjust itself to it. But in this process of adjustment many employers are repeating the same mistake of forcing employees to look to government for protecting their rights rather than freely granting as a policy of industrial management what the employees have a right to have. Thus many employers while paying lip service to the principle of the Act are proposing amendments for the purpose of defeating this principle and weakening the protection it gives the employees. This is bound to fail, however, because such efforts on the part of industry keep labor actively in politics to protect its rights through governmental action, and at the same time such efforts teach wage earners to distrust the results they can get by bargaining directly with their employers.

What industry has done with respect to the Wagner Act illustrates excellently the wrong way to approach the matter of adjusting industry to labor legislation. When the bill was introduced in Congress by Senator Wagner as a result of the failure of the National Labor

Board under the N. R. A., industry opposed the bill. Then when it was adopted into law by an overwhelming vote of Congress, industry appealed to the courts to nullify the law. National organizations of employers actually issued instructions to their members not to obey the law until the Supreme Court had passed upon it. Some fifty odd leading lawyers of the American Bar Association, most of them corporation attorneys, issued a pronouncement declaring that the law was unconstitutional. This, of course, stimulated disobedience of the Act by employers throughout the country.

But it did much more harm than that. By example, the employers taught the working people that a law of Congress is not to be obeyed until after the courts have passed upon it. A law of Congress is a law until it is set aside by a court. We who don't like it cannot set it aside. Courts have held that the right to organize and bargain collectively is a property right. Suppose the American Federation of Labor or the C. I. O. sent out word when Congress or a state legislature passed a law to protect property rights of business and employers: "Don't obey this law until the Supreme Court has approved it." We would certainly say that they were undermining the American system of government, and they would be. Those employers' associations who did this set an example of radicalism and un-Americanism in this country the effects of which they little realized.

And what management policies did industry pursue when faced with the Government's guarantee of labor's organization and bargaining rights? First it professed concern for minorities and turned to employee representation plans as a means of protecting minority groups. When this failed to stem the tide of unionization, employers offered company unions. When these were outlawed it offered so-called independent unions as a substitute. And now when unionism appears inevitable many industries are favoring the A. F. of L. as preferable to the C. I. O. So industry has jumped from one hole into another to avoid somehow giving the employees what they wanted and what the country thought they had a right to have.

With respect to minimum wages and maximum hours the story is much the same. Here also failure of voluntary action under the N. R. A. forced action by the Government. Organized employers opposed the legislation, but provided no method themselves for putting a bottom under wages and a ceiling for hours of labor. So the legislation is here and here to stay in one form or another. So also, until the last, industry opposed unemployment insurance and old age pensions although

the public demand for Social Security was so overwhelming that it was expressing itself in wild proposals such as the Townsend scheme.

What I have said about employers pursuing wrong policies in adjusting themselves to new legislation is true also of labor organizations. When employees have secured the right to organize and bargain collectively with the aid of the Government, they also cannot afford to push their policies to the point where the public generally will have to go into politics to force the labor unions to be reasonable. Do not get the idea from what I have said that because employers were rather stupid in the way they handled their problems of adjustment to the new legislation, that therefore the labor organizations were wise.

In Oregon, for example, and other places on the Pacific Coast, unions did not know how to keep within their legitimate functions. They talked about the right of working people to organize so they could bargain collectively with employers; but as soon as they got the right they began fighting among themselves, one union boycotting another, interfering with the right of other people to do business and abusing their powers in other ways. As a result, the people of Oregon were aroused, and by a state-wide referendum they enacted a law restricting the rights of labor organizations. In Philadelphia when the city wanted to levy an income tax, or something of that kind, some of the unions came out with statements that they would strike against the tax. When unions begin striking against taxes they are getting out of their legitimate sphere. Such strikes are strikes against the Government. If unions insist in sponsoring such strikes, people will insist on restricting their privileges as Oregon has already done. The right to organize and bargain collectively does not include this kind of business.

Neither employers nor working people accomplish anything by damming laws that come as a result of their own failure to use their privileges and powers with reasonableness and discretion. Their first need is to learn so to handle their own affairs that legislation will not be necessary. But some legislation is bound to come, and then, it is important to realize the need rather than to oppose what is inevitable to meet the need. If this were done, both employers and workers would be on the inside helping to draft the legislation in a reasonable way rather than have legislation imposed upon them by people who have been aroused by the abuses. The same is true with respect to the administration of the laws after they have been enacted. Understanding the

reasons for the legislation, employers and workers hurt their own interests when they oppose and work to weaken administration rather than co-operate to make it more intelligent, practical and efficient.

We have heard a great deal recently from employers' associations to the effect that business needs to sell itself to the country, that it needs better public relations and to give employes more information about the condition of industry and the business point of view. To my mind, this is an unintelligent attempt at adjustment. It assumes that industry is right and that employes and the public are either wrong or ignorant; therefore, it is necessary to "educate" people by giving them the kind of facts that will bring them around to the views of the employers. I remember a meeting in Milwaukee many years ago, at which Frederick Taylor debated "scientific management" with a union leader. Taylor said that the scientific way for management to approach a problem is to say to itself: "Where are we wrong? What have we failed to do?" The wrong approach he thought was to assume that the employe, the other fel-

low, was wrong and that somehow we needed to educate him.

Rather than a public relations department, I think industry needs most an "ear-to-the-ground department," to learn what working people and the country are thinking about, to know their needs and to be prepared to meet those needs. If industry learned to know in advance the facts such as I have mentioned about employment going down while prosperity was going up, and about the public feeling that labor must have the right to organize and must bargain collectively, it will find its own methods of appropriate adjustment. It will find ways which will be better than any you can think of, and perhaps better also than the Government can devise. But industry must have an "ear-to-the-ground department" to collect such facts and to understand their significance. The basic need for industry's adjustment is that it shall thoroughly understand the facts and ideas that move human beings and the societies in which they live.

BOOK REVIEW

Principles of Engineering Economy. By Eugene L. Grant, The Ronald Press Company, New York, Revised Edition, pages xix, 431. (\$3.75.)

For some years, Grant's "Principles of Engineering Economy" has been an outstanding contribution in the field of applied economics. Too often the engineer concerns himself with only the technical aspects of his work, leaving the economic consideration "Will it pay?" to those who, though better versed in finance, do not always understand the engineering aspects. Grant holds that economy studies are quite within the range of the engineer's work. The revision of this book will be received with interest by those engaged in the teaching and practice of engineering as well as industrialists and business executives generally.

In his preface to the revised edition Grant lists the changes as follows:

1. An expansion of the material on compound interest.
2. A substitution of a new form of interest table which experience has indicated to be more satisfactory for class use.
3. An integration of the material on judgment factors with the discussion of specific problems of economy.
4. An expansion of the material dealing with the economic aspects of the replacement of machines and structures.
5. An expansion of the material dealing with the economic aspects of public works.
6. A discussion of formulas for economy.

The material on statistical technique contained in the original book has been left out entirely from the revision. All problems, other than those worked out for illustrative purposes, are contained in a separate volume.

As in the first edition the book is divided into parts, al-

though the arrangement is different. Part I (3 chapters) points out the danger of "hunch" decisions and stresses the fact that all decisions are between or among two or more possible plans.

Part II (7 chapters) presents the subject of interest and stresses the importance of equivalence in economy studies. Compound interest and annuity problems are worked out and formulas illustrated. Present worth, and capitalized cost are treated in this section.

Part III (16 chapters) outlines the techniques of economy studies. This is the most important part of the book. Distinction is drawn between immediate and long run economy. "Will it pay?" as a criterion of all such studies is stressed. Definition and illustration of depreciation and increment costs, break-even and minimum cost point, capacity and load factor are given. Chapter 20 of this section treats of economy studies in connection with public works and cites conditions peculiar to such work.

Part IV (3 chapters) points out some of the obstacles to economy encountered in actual practice, within the individual enterprise and also from the larger viewpoint—that of the industrial group and society as a whole. A final chapter treats briefly Engineering Reports and Budgets.

An appendix gives a brief treatment of the "Technique of Estimating Costs." A separate paper bound volume contains only problems based on each chapter of the text. Answers do not accompany the problems.

While the original text was nicely suited to its purpose, the revised edition is an improvement on it. It is recommended for the use of teachers and students of engineering economy as well as those practicing engineers and business executives whose duty it is to make decisions regarding the expenditures of funds for equipment or operations of an engineering nature. By GEORGE W. BARNWELL, Associate Professor of Economics of Engineering, Stevens Institute of Technology, Hoboken.

Administrative Organization for Policy Planning

By E. J. COIL

Director, National Economic and Social Planning Association, Washington, D. C.

Address presented at the Annual Meeting of The Society for the Advancement of Management, December 9, 1938

The Emergence of a New Problem

THE outstanding characteristic of our time is the change from an economy of individuals to an economy of organizations. No theory, but the evidence of direct observation, reveals that most of our economic and business life now is conducted within an administrative structure, and guided by administrative decisions.

We have long recognized that the division of labor within a business enterprise is not automatically established and maintained. There is no all-wise, inner voice which tells each individual what he should do and when. Rather, the interrelationships between specialized activities must be established by designing arrangements, preparing schedules, issuing instructions, interpreting duties, and checking performance.

During recent decades, however, new relationships have accumulated. The one-plant, one-product company has become the many-units, many-products enterprise. Management no longer deals only with employees and stockholders, but also has administrative relations with government and trade associations. To the traditional inner-circle has been added an outer-circle of functional relationships. And government—more because of immediate necessity than of theoretical conviction—has sought to obtain greater balance among the various parts of the economy and to integrate the national activities as a whole. The problems of administrative management have gone beyond the borders of the individual firm. The management problems of today and tomorrow include two other levels: there is the intra-industry level, as between concerns within each industry; and the inter-industry level between major industries involving relations between government and industry.

As Professor Philip Cabot stated at the Seventh International Management Congress, such a change in the scale and scope of management operations is more than one of degree. "It amounts to a metamorphosis, and we

should recognize that these great organizations are in fact new creations which have produced new social conditions and require new administrative methods." The theories and methods of "two men and a boy on a desert island" are no longer appropriate. The multitude of prevailing interrelationships has created the key problem of social organization—the problem of planning and co-ordinating the work of specialized organizations.

The Development of the Staff Concept

It has long been held that investigation and thought should precede action. As the spheres of administration have expanded, the need for such a procedure has become more obvious. In 1918 the Haldane Committee on the British Machinery of Government reported, "It appears to us that adequate provision has not been made in the past for the organized acquisition of facts and information, and for the systematic application of thought, as preliminary to the settlement of policy and its subsequent administration."

"This is no new notion," said the Committee. "There are well-known spheres of action in which the principle has been adopted of placing the business of enquiry and thinking in the hands of persons definitely charged with it, whose duty is to study the future, and work out plans and advise those responsible for policy or engaged in actual administration. The reason of the separation of work has been the proved impracticability of devoting the necessary time to thinking out organization and preparation for action in the mere interstices of the time required for the transaction of business."

This concept of segregating the work of preparation from that of execution has evolved principally from military experience. Today the practice of having a special personnel group assist the chief executive and the operating officials in planning and integrating their work has been extended to many business and some civil authorities. The staff has become a significant instrument for effective administrative management.

It is not my purpose, however, to attempt to establish the need for staff work, or to prove its benefits. Rather, it is the aim here to stimulate analysis of staff principles by presenting some judgments pertaining to staff planning in the field of policy. By observing experience to date, it should be possible to learn some lessons regarding the functions, structure, and personnel of a policy-planning staff.

You will note that only that phase of staff work relating to administrative policy planning is under consideration. Word trouble usually appears in any relatively new field of study, and administrative management is no exception. The word "staff" is especially elusive in meaning, and frequently is devoid of meaning when removed from its context. As a matter of fact, experience has shown that there are several spheres of staff work, each with its appropriate jurisdiction. To distinguish between these spheres and clarify our understanding of staff work, we may briefly define what seem to be the three major categories.

There is first the *operative staff-council*. The functional heads of major services, such as purchasing, sales, finance, legal and engineering, are frequently thought of collectively as a central staff. As business becomes departmentalized, the heads of departments seem to constitute a council or group working directly under the chief executive. In the field of government the President's Cabinet belongs to this category. Such functional chiefs are in reality line officials with powers of command. Except for indicating that this concept of staff is perhaps the oldest, we are not concerned with it here.

The second concept is the *management staff* which has the function of executive co-ordination and supervision. This staff is an adjunct of the executive responsible directly to him. It assists in maintaining a going concern by providing a liaison relationship between the executive and the functional and operating personnel. It organizes and integrates work so that there may be purposeful and effective control, and smooth and efficient co-ordination throughout all the various interlocking parts.

As the executive's secretariat, it raises problems of operations and tactics for his decision, assembles the information necessary, and issues his instructions in his name. It follows work in process to see that it is performed according to the instructions and schedules, and reports to the executive if adjustments or changes in instructions seem required. In short, the management staff is an extension of the executive's personality. It

is what the executive would be if he were five men, or ten men, or however large the staff may be. Although this sphere of staff work is of vastly growing significance, we are not concerned directly with it here.

The third category of staff work is that performed by the *administrative-planning staff*. This planning staff assists and advises the executive on questions of organization and policy affecting the enterprise as a whole in its relations to business conditions and economic trends, if it be a business enterprise. Here the social and economic problems arising from intra- and inter-industrial relationships are analyzed and thought through. Here, on this top level or plane of higher administration, is the over-all planning and policy planning which our modern economy requires of all large scale enterprises, be they public or private. It is on some of the problems of this administrative planning staff that I wish to focus thinking. By developing interplay between hypothesis and evidence, group thinking can promote the growth of understanding.

Proposition 1

A planning staff must do more than merely indicate the alternate lines of policy; it must make recommendations by indicating priorities.

According to theory, the staff serves in an advisory capacity to the chief executive. But merely to state that a staff's duties are purely advisory is no more edifying than to say that a business succeeds because of good management. A more precise definition of function is required. It is the function of a planning staff to gather the facts, organize them, interpret them, indicate the alternate policies, and rank the potential policies in accordance with the staff's judgment as to their relative suitability and desirability.

In recent years there has been a tendency to think of research as implying only the establishment of facts. But facts do not speak for themselves. To design operative policies calls for judgment and evaluation. Although policy should be supported by factual evidence, the facts as such never determine policy. "It is only by analysis, comparison, hypothesis and prophecy that they can be made to speak at all. The piling up of undigested information, the compiling of vast statistical tables, and the detailed recording of events in time, create the same illusion of discovery for the compiler and recorder as do the equations for the logician. But

it is equally an illusion."¹ Although we do an immense amount of specialized work in the region of facts, much of it is "dead" work, lacking in vitality. As John Dewey has said, "We forget that facts are only data; that is, are only fragmentary, uncompleted meanings." A planning staff must be willing to state its judgment; it must be willing to fit facts into working formulae.

Unless it takes this initiative of interpretation and selection, the planning staff will probably become impotent. A body which seeks to avoid offending anyone, soon loses its power to say anything. Unless a staff thinks through problems in terms of priorities of policies, the executive will not rely on it for advice. It will nullify its reason for existence.

In taking the initiative of making recommendations, the staff does not impair the power of the executive to command. The staff does have authority—the authority which goes with knowledge. A planning staff should exercise authority in keeping with its functions; it is a point of central control because knowledge and experience on the matter in question are brought to a focus. It is proposed here that the staff should *formulate* policies, because that is in keeping with its function and authority; the staff should not *determine* policy, because that is the executive's function of command.

Proposition 2

It is the function of the administrative staff to advise and not to propagandize the organization or the public.

Factual authority and understanding can be used to persuade. If one recognizes this, the question arises as to where policy persuasion ends and policy selling begins. In private enterprises the answer is not difficult: there is no public announcement until policy has been determined, and then the function of public explanation and justification belongs to the *operative staff services* of sales and advertising. If the advisory relation to the chief executive is to be maintained, it certainly seems that there should be no publication of findings concerning a problem without the consent of the executive.

In public and semi-public organizations, however, this functional problem is more difficult. Once a policy has been determined, it certainly seems that the findings and interpretations should be made public documents so that the policy can be adequately understood. Or, it may be that a policy needs explanation prior to adoption and execution in order to generate public support. In

a democratic society, popular understanding of objectives and the reasoning therefor is essential.

But is it always for the executive to decide whether and when such support should be sought? A democracy seems to require that the findings and recommendations of a staff automatically be made public property—the staff should not decide but should obey the public desire in the matter. In a democracy, the electorate and their legislative representatives need guidance. It is now commonplace to observe that legislators are not technically equipped to analyze the problems which confront them. In fact, the bewildering attempts of legislators to concoct recipes without the aid of technical experts has done much to discredit democracy. Should Congress have its own research staff or should legislative proposals be referred to the planning staff for analysis before debate takes place? This problem of relationship between the planning staff and the legislative body is not so difficult in England where the executive is a member of Parliament, but in the United States no satisfactory solution has yet been advanced.

It should be borne in mind that in a democracy the electorate is the ultimate policy-determining executive.

As far as the executive is concerned, however, an administrative staff cannot be supreme in publicizing what it thinks should be done in matters of policy. The staff is an aid to the executive and not a substitute for him. It is an institution for administrative planning and not a rostrum for spectacular "brain-trusting."

Proposition 3

It is the function of the administrative staff, as a part of policy planning, to consider the broad ways and means of attaining desired objectives.

No one would deny that although an executive may seek the most admirable objectives, his success is often determined in part by his organizational machinery. There are some who hold, however, that problems of organization do not come within the jurisdiction of a policy planning staff. Policy planning is assumed to be solely concerned with indicating ends, and not with considering the organizational aspects of ways and means. Those who hold this view believe that all problems of organization come within the province of the management.

It is not possible to accept this view because how to get there seems to be an inherent part of the problem of deciding where one wants to go. Over-all policy

¹ E. F. M. Durbin, *The Economic Journal*, June, 1938. p. 188.

planning must consider the broad problems of organizational structure. Unless policy is related to ways and means of implementing policy, the attainment of ends is left to the control of circumstances rather than knowledge being applied to control change. In gathering and analyzing information to formulate policies, a staff invariably begins to foresee the organizational relations involved. Understanding the work to be done, it begins to create the organizational framework which can be entrusted with the performance of the task.

For example, it may be policy to establish another TVA for the objectives of conservation of resources. But the attainment of that objective will certainly be influenced by whether a three-man board or a one-man commissioner is to administer, and whether the new authority shall be independent or under the jurisdiction of some existing department of the Government.

This is but saying again that an interdependency exists between function and form, and that it is the job of a planning staff to consider the relations between function, structure, and environment so policies will possess unity.

Proposition 4

It is the function of the administrative staff to exercise an over-all co-ordinating influence on the administrative plane, and to work in close relationship with the management staff.

It has been indicated above that after policy has been determined and the relatively broad ways and means approved, the job of control and co-ordination passes to the management staff. The management staff then works out the details and sees that the departments and operating officials are informed of their respective parts in the general scheme. This division of work does not imply, however, that the administrative planning staff has no further interest in matters of co-ordination and policy fulfilment.

Planning is a continuous process, and to make policy studies without continuous observation of performance is frequently futile. Regardless of the care with which a policy is thought through before being applied, execution always involves some unforeseen reactions requiring adjustment in the total situation. Although it is the function of the management staff to check details of performance and efficiency, it is the function of the administrative staff to follow fulfilment and to plan continuously the administrative adjustments of policy

and integration of the various branches of the enterprise or of the economy.

For example, in an automobile company, it may be the approved policy to produce 1,000 units daily of a car retailing at \$1,500. It is the job of the management staff to issue instructions and co-ordinate work to maintain that schedule. On the other hand, it is the job of the administrative staff to make running studies and comparisons between the existing production schedule and the market for cars by income classes and price ranges. If it foresees possible maladjustments looming ahead, it should formulate appropriate measures.

Although the administrative staff is primarily concerned with planning, and the management staff with co-ordination, the function of co-ordination and supervision is actually shared, but with distinctly different emphasis. Unless the distinction is made, it is probable that the detailed co-ordination of the current flow of work will get the most attention and planning and over-all co-ordination for controlled adjustment to change will be dangerously minimized.

Up to this point the term "general staff" has not been employed, although the term is being widely adopted to indicate staff work which aids administrative management. We now see that the general staff is a collective term which incorporates the concepts of both administrative and management staff work. Within a general staff, however, it is always wise to maintain these respective functional jurisdictions. The general staff is really, therefore, a system of integrated staffs.

Proposition 5

The administrative staff must maintain continuous relations with all sub-staffs within the total organization.

Planning cannot be effective on the administrative level unless there is planning within departments and divisions of the organization. The staff concept is not confined solely to the plane of the chief executive; operating executives should have their respective staffs to assist them. Thus a sales manager may have a special market study staff, and a production manager a special corps of industrial engineers. Depending on the size and scale of the organization, there should be staffs located at various levels of function and also on horizontal levels to cover the work performed within geographical areas. To be effective, over-all planning must be supplemented and supported by a "throughout" planning structure.

With these sub-staffs the administrative staff—and the management staff—must maintain continuous relations. The administrative staff must pass on subordinate policies of various departments insofar as they affect the general interest. Unless sub-plans pass inspection from an over-all point of view, the sub-staffs will distort the organization's work by pulling in opposite directions. By examining the policy plans of these sub-staffs, the plans can be related and integrated within the total policy situation.

Not only must there be opportunities for administrative pre-views of policy and reviews of fulfilment, but the administrative staff must establish standards of methods and procedures. Without some standard forms and procedures, co-ordinative control is lost in an anarchy of methodology. Especially in large and complex enterprises, there is the danger of decentralization being nothing more than the establishment of irresponsible planning staffs which, instead of facilitating, actually destroy unified administrative planning.

Co-ordinative control by the administrative staff does not imply the giving of direct commands. If the staff of one level had executive authority over that of another, the regular operating officials would soon resent what they would consider an intervention in their own activities, and the opportunity for the sub-staff to assist the sub-executive would be lost. Although much must be done in developing rational and efficient relations between levels of planning, it does seem that orders must always pass through the line officials. The administrative staff may advise the executive to issue the necessary orders or recommendations which will reach the sub-planning staffs through the sub-executives to whom they are responsible. It is possible to develop a liaison of intelligence and understanding without infringing upon the command of line officials. In actuality, the product of an integrated planning structure will be a two-way flow of cumulative control and authority.

Proposition 6

The administrative staff is directly responsible to the chief executive.

The administrative planning staff must be located directly adjacent to the top executive. Policy planning has to be done under the immediate control of the chief executive because he alone is responsible for seeing the over-all situation. It is he who has to compare one line of policy with another, to judge the relation of present and future policy, and to determine the general strategy.

Only the executive has the power to harmonize policy throughout the entire organization.

If the administrative staff is located within a department and placed under a functional manager, its work is immediately distorted. It seems impossible for a staff to maintain an over-all breadth of organizational vision if it is subordinated to a particular function. In addition, the locating of a staff within one department invariably creates friction between departments and severely interferes with the necessary inter-departmental co-operation.

When the policy staff is in any way removed from immediate and direct contact with the chief executive, the progress of work is delayed. As policy problems are continuously bombarding the executive, any delay in staff help presents an opportunity for arbitrary judgment to supersede planned judgment. The planning process must be geared to the flow of activity. The staff must be its own connecting link with the executive.

Experience also shows that whenever an administrative staff is established the line and functional managers always look on it initially with feelings ranging from skepticism to hostility. If the staff is to remain alive long enough to prove itself, it has to be attached to the top executive.

Placing the staff adjacent to the executive does not imply that every member of the staff should report personally to the executive. Every staff must have a head or chief of staff to serve as the center of focus for executive relationships. Even where there is a planning commission or council of several members, one member should be the chief in order to reduce the number of contacts between the executive and the staff.

Proposition 7

In being directly responsible to the chief executive, the staff represents no special interests except the interests of the whole organization.

An administrative staff for policy planning is not a council made up of representatives of those who have an interest in policy. As indicated earlier, functional chiefs may make up a council like the President's Cabinet—and it seems probable that most executives feel that one cabinet is enough. As their personal arm on policy matters, executives do not want an organized lobby. The executive wants and needs over-all, informed, disinterested advice, and this can only be obtained from an agency which represents the whole, rather than one which has allegiances to segments.

Otherwise, it is impossible for the executive to have confidence in advice which originates in interested sources.

By the same reasoning, it also follows that the administrative staff is an organized, continuing staff—a secretariat—and not a committee. Committees, by their very nature, are representative. As a mechanism for policy planning they are expensive time-consumers. Instead of clarifying policy they frequently produce compromises which complicate and confuse the executive's task of administration.

This does not mean that committees and representatives of interests have no place in the processes of policy planning. They do. A planning staff should utilize committees to obtain points of view, clarify issues, secure special information and experience, and to harmonize conflicts of interest. Representative interests outside the organization should be brought in as experts and consultants, as the radio broadcasting industry is doing today. And representative committees can be used to aid the work of integration. The planning staff must always be sufficiently flexible to secure all necessary information. People who represent the outside have frequently greater freedom and independence of judgment than those closely connected with an enterprise. Committees and lobbies have their place in the planning process, but they should not constitute the planning structure.

Proposition 8

Administrative staff work for policy planning is a full-time function.

Although the administrative planning staff can well utilize consultants and committees on a part-time basis, the members of the staff—including the chief—should work on a full-time basis. Planning is continuous, and policies are subject to constant revision. In any large organization, it seems that part-time policy planners cannot follow the work of the operating departments, cannot know what present policies are, and what changes are occurring.

Lacking a sense of continuity, part-time planners cannot follow through to comprehend the over-all ramifications of policy. They cannot respond quickly when the executive wants advice because there is always the task of catching up. Effectiveness of planning is in large part contingent on the promptness of advice, and it requires full-time study to give interpretations and formu-

late recommendations. Because of sheer lack of time, part-time planners frequently can give the executive only undigested facts.

The great advantage of staff-work is group thinking. There must be a sense of group responsibility and unity. Through steady—not occasional—work, the staff pools its resources, and complex problems of policy yield to concerted attack. Again it may be emphasized that a staff is an institution and not a collection of individuals.

Proposition 9

Administrative staff members should be "generalists," not specialists, although of course they utilize specialists.

The very concept of organization implies not only a division of labor but also a synthesis of that labor. Although knowledge has been advanced by specialization, it has been discovered that specialization creates resistances to integration. The executive, who must cope with complex problems in a comprehensive manner, frequently finds great reluctance on the part of specialized personnel to bring the parts together again. The more insistent the need for relating all the parts, the more difficult it seems to find someone with sufficient grasp of all parts.

The Committee on Social and Economic Research in Agriculture of the Social Science Research Council has pointed the way out. The Committee states that for specialists to "go into an area and each make a more or less separate analysis to be co-ordinated at the end of the study, has been demonstrated by experience to be an inefficient, ineffective, and usually futile procedure. The problem must be attacked as a whole, simultaneously on all fronts, with constant cross-checking of its interdependent elements, and with all workers operating as a team under a planning leader who can at all times see the problem as a whole, can keep in mind the goal of a practical, workable plan, and can co-ordinate, weigh and balance the activities of the specialists toward that end."

This task of putting findings together so that they will produce a purposeful program of administrative action is a distinct function. A policy planner must have the abilities of a generalist rather than those of a specialist. Even though he has special technical training—and many researchers are needed in planning—his attitude should be that of understanding relations. A generalist should possess a sense of perspective and proportion, should be able to divide problems into their sub-parts and to give each its weight, and should analyze

and diagnose. He should be able to synthesize the data and produce a reasoned statement of recommendation, a workable solution. A generalist has the capacity to differentiate, to relate, to think through to a well-rounded judgment.

Proposition 10

Administrative staff members must be purposefully trained for the function of policy planning.

A real challenge to organization is the future of its personnel. Certainly, at present, the opportunities and methods for developing persons skilled in staff work are far from adequate. We may have had some success in developing the abilities of functional managers, but it is doubtful if functional managers can be transformed into staff members. Rather, it seems that a thorough program of selection and training is required.

It is not enough to have a career service with opportunities for permanent work and advancement. Training must begin at an earlier date. The co-operation of the universities must be sought. As President Dodd of Princeton said, the "universities must strive to surmount departmental boundaries and consciously encourage young men to think comprehensively, and as a step to this end to develop new tools of thought with which to reason comprehensively." When the students leave school they should have some appreciation of the fact that no problem is one of economics, or engineering, or law alone.

Formal training must continue on the job, not as a side issue but as full-time seminars in which group

thinking is stimulated. Such graduate work should give an understanding of functional relationships and a sense for the wholeness of organizational activity. Those who show signs of promise in the service schools should then be detailed to staff work for a "tour of duty." There seems to be much of value in the army system of rotating staff members so that experience in both line and staff work is accumulated. By so doing mutual respect increases between line and staff officials. Business and civil authorities can well afford to study this procedure.

We can well afford to study ways and means of developing our planning talents. Much discussion of recent years has revolved about the question of "Plan or No Plan." "We have talked as if the real issue was to *plan or not to plan*, and people have taken sides for and against planning."² The fact is that whether we shall plan or not is no longer the issue. That question has been decided by the flow of events. Planning is necessary if we are to organize ourselves for action.

The real issue is the type and extent of administrative management for efficient and democratic organization. Can we improve the methods of devising policy so as to combine flexibility with direction? Although planning staffs and structures cannot be brought into existence overnight, the issue is worth persistent effort. "Strong-arm" intervention is a poor substitute for well-informed, integrated organizations guided by policies based on factual understanding. If organizations are to justify their social existence, they need the instrument of the planning staff.

² B. Ohlin, *The World's Economic Future*, George Allen & Unwin, London, 1938, p. 66.

BOOK REVIEW

The Management of Labor Relations. By Gordon S. Watkins and Paul A. Dodd, McGraw-Hill Book Company, New York and London, 1938, pages xviii, 780. (\$4.00)

The administration of an enterprise involves the management of things and people, and the successful co-ordination of mechanical and human forces. People are not like things; labor is not a commodity. So in Part I the authors thoughtfully analyze the causes of problems in the management of people, and in the light of these problems and their causes, point out the needs of specialized administration in labor relations. Part II deals with psychological aspects of labor relations by considering some fundamental characteristics of human nature, such as emotions, habits and basic instincts or impulses.

The problems of personnel relations are then treated under the categories of (a) Recruitment, Selection and Placement, (b) the Maintenance of Personnel, and (c) the establishing and conducting of helpful Joint Relations. These three categories are covered in parts III, IV, and VI. A brief Part V is devoted to personnel relations under Civil Service.

The book gives recent references and cites laws or regulations up to within the past few months. It is compact, containing a fairly comprehensive discussion of nearly all phases of personnel administration. A selected reference list on each chapter is appended, and the index of 25 pages will be found a great convenience.

The authors maintain that although there is a conflict in the interest of employers and employees, both sides will unquestionably find it profitable to co-operate with each other. Sound co-operation is not merely an attitude; good intentions must be

(Continued on page 24)

Standards of Efficiency in Governmental Activities

By PERRY A. FELLOWS

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Address delivered at the Annual Meeting of The Society for the Advancement of Management, December 8, 1938

THE Society for the Advancement of Management is interested in the study of efficiency in the execution of governmental functions, and in the study of the applicability of the principles of scientific management to promote such efficiency. The field of government functions is by no means new; but it has recently become greatly enlarged in scope, and it appears destined to remain of large scope—probably in our lifetimes it will become increasingly larger. Government functions are therefore a field of great importance to all those interested in the application to all human endeavor of the principles of scientific management.

It is far from true that these principles are well understood or widely applied in the other great field of private industry. Private industry as a whole is a long way from being scientifically efficient. But at least it is true that in the field of private industry the ideal of efficiency is universally cherished. Business genius, business intuition, and other semi-mystical qualities of leadership, are still very generally relied upon to produce results in the field of private industry, and such results as accrue from these flashes of inspiration or promptings of whim—whichever they may be—are commonly accepted by the yes-men of private industry as the last word in efficiency. Scientific management, in pushing itself into this field, has been regarded with some contempt as a prosaic and vulgarly human effort, inferior in character to the divine flights of business imagination by which the big and little captains of industry were guided. It is only slowly that scientific management has been permitted to show the captains of industry what it could do. It is still in a subservient role in that realm; and though it has already worked what seem to be miracles there, it is still permitted, from its own point of view, to make only a small contribution to the operations of private industry.

The essence of scientific management, as of all science of every kind, is measurement. It is by measuring minute quantities of time and motion, and eliminating waste,

that some of the most impressive miracles of scientific management in industry have been achieved. But measurement is not, of course, mere counting. It is comparison. It is a setting of one thing against another—of the present against the past performance or the present against the future performance—of the accomplishment against the plan, of the actual against the possible. Now there is only one form of measurement to which business men have in the past been accustomed, and that was the simple measurement of the figures on the debit and the credit sides of their ledger. They understood income and outgo, they understood profit and loss. The other elements of business enterprise were categorically lumped together as "risk," and regarded as a subject for intuitive business judgments. With proper intuitive guidance, risks might result in splendid gains; but if business intuition went askew, the result might be ruin. It is into this mysterious and poetic field of "risk" that scientific management went with its measuring-sticks. It insisted on regarding all these cloudy elements of risk as classifiable and measurable. It has justified its presumption, and we may conclude that scientific management is only at the beginning of the great task that it can perform for private industry.

While this task has only begun, scientific management now finds another field, that of governmental activity, lying before it. Here, too, scientific management is obliged to enter and offer its services. This is, of course, a somewhat different field from that of private industry. It is in some ways a simpler field, in other ways a much more complex field. It would require far more time than I am privileged to take to define all the differences or even to outline them, from the point of view of scientific management. But I should like to select one important difference between governmental activity and private industry, as indicating a different approach in undertaking to apply the principles of scientific management.

Private industry tends to accept only one kind of measurement of efficiency—the kind that will show on the books of a ledger in terms of profit. This, it is as well to remember, is not a limitation inherent in scientific management; it is merely a limitation traditional in business. The ledger test is one that the practitioners of scientific management in private industry have readily accepted and successfully met. But it is clear that there are different tests that must be met by scientific management in governmental activities.

Governmental activity has as its object, not the accumulation of profits, but the welfare of the people. We cannot judge the efficiency of our Army or Navy by their ledgers, because they have no profits to show—no money profits. The security of the nation is the test by which we judge the efficiency of such governmental functions. If we were to put the gains of peace as against war, or of victory against defeat, into a ledger, we should have to have a different kind of bookkeeping from that of the private business man. We do, in effect, have a different kind of national bookkeeping than private business has. And any attempt to import literally the financial profit bookkeeping of private business into governmental activities involves a misunderstanding of the nature and purpose of these activities.

The misunderstanding is perhaps not likely ever to occur in regard to our Army and Navy. But it is likely to occur in some of the newer governmental activities which resemble those of private industry. This misunderstanding does in fact occur in the minds of many business men. But it must not occur in the minds of the exponents of scientific management.

What is a worthwhile business undertaking? One which brings profits to the investors, according to traditional business dogma. But it is not so simple as that in the field of governmental activity. What is a worthwhile work-relief project? One which is needed by the community and one which provides the right kind of work for the needy unemployed.

The need of the community for the project itself, and the need of the unemployed for work on the project, here replace the need of the private investor for profits, as the purpose of the enterprise. The project is efficient, or not efficient, by standards different from those that apply in private industry. A business may be efficient in private industry which destroys the health of the workers. We now seek to discourage such kinds of

business efficiency as destroy the lives of workers by radium-poisoning, for example, and it is evident that the standards of business efficiency are subject to revision, legally if necessary, in the interests of the general welfare, including particularly the health of the workers. But in a government work-relief project these social considerations are raised from a position of subsidiary or questionable importance to a position of prime importance.

One of the current tests of the worthwhileness of a work project is whether it serves to maintain or restore the morale of the workers, and so maintain, restore or retrain their skills, as to fit them for re-employment by private industry. If such re-employment is out of the question, as it may be for workers over the age when they are acceptable to private industry, but are still capable of doing good work for the community, a still different measurement of the efficiency of the project is required.

Let me briefly sum up the matter that I have selected for emphasis here.

The American people do not always put a dollar sign in front of their estimates of merit. Because of the fact that merit in private enterprise so often leads to success in terms of profit, and because of the traditional financial astuteness of American industrialists, a wrong impression is entertained by some critics.

Americans have authorized their public servants to do worthwhile things without requiring first reference always to be made to the minimum expenditure for the maximum physical product. That method of measuring efficiency must here yield to the method which compares accomplishment with failure to accomplish, and the method which compares accomplishment with desirable goals still to be attained. Americans are more than ever accepting this different standard of measuring efficiency; this is shown by the adoption of social legislation and by the acceptance of such work programs as the Works Progress Administration.

The acceptance of this change in prime purpose does not make it excusable if less than the best efforts are exerted by each of us. Any assistance The Society for the Advancement of Management can give governmental agencies in the more efficient performance of their task will be most acceptable, even though our efficiency must be measured in terms of social savings rather than of dollar dividends.

Time Standards From Standard Data

By PHIL CARROLL, JR.

Vice President, Dyer Engineers, Inc., Cleveland

Address given at the Annual Meeting of The Society for the Advancement of Management, December 9, 1938

THE principles about to be outlined have been applied successfully to the measurement of effort, covering a production range of 38,000 pieces per minute to one per week. They represent the findings of twenty years of personal experience in more than fifty manufacturing plants.

I want to use a text and yet avoid preaching. I found a suitable one in an editorial in *Factory and Industrial Management* entitled "Prostituting Time Study." Let me quote but two sentences. "When time study has sunk so low that any clerk can do it and use it exclusively for purposes of rate setting, it is time to call a halt. Time study has a higher purpose."

Purposes of Time Study

One of the higher purposes of time study is to build standard data. This procedure is necessary to insure consistent standards, economically established to provide both incentive and management controls. A much higher type of engineering effort is required than the clerk mentioned in the editorial can ever attempt.

Standards for the measurement of effort are used primarily to provide a basis for increased operator earnings, increased productivity and decreased costs. With standards based on the correct conception of a normal operator, we have a firm foundation on which to build many business controls. Incentives can be arranged to make budgets more effective, reduce material waste, and improve the control of all other expenses. From these should be evolved the normal costs for parts and product groups. Analysis of the facts obtained should determine the economics of investments to be made in tools, equipment, and numerous other forms of development. Furthermore, management will then know the profitable products, the correct overheads and the actual effects of sales volume.

Control

The word "control" has several gradations in meaning, but the one "to exercise a directing influence over" when applied to a business means creating the circumstances, instead of accepting them as they are. The management which is exercising control over a business, does not stand by and wait for things to happen, but instead takes constructive action. Measurement then has two general applications, incentive and control.

Originally, management thought the sole purpose of measurement was to increase production although some engineers understood that the aim should be complete control of all variables. Many leaders of industry have changed their interpretation of the goal of measurement so that now they too think of time study as simply a means to an end—that of control.

Standards set for wage incentive purposes can be used for control purposes only when they are expressed in time, and correctly represent salable product. Under those conditions, the output of a plant can be measured in terms of a common denominator, man minutes of good work, (units if you please). In a few industries where only one product is made, a universal denominator exists as "pieces produced." Cigarettes might be an example, but not pounds. A cigarette would be a perfect denominator because it does not contain any of the "humanics" of time study.

This extension of the use of time study for control purposes has modified certain practices. Some have become more important, while others may be considered as minor details. The kind and number of stop watches, the design of the time study sheet and other record forms are unimportant. On the other hand standards for control purposes must be fixed, irrespective of quantity and current conditions, consistent with each other and economically applied to the bulk of productive effort. These requirements practically eliminate the

use of direct time study methods. Instead, elementary time standards are arranged to form standard data which will meet these specifications. Economy of application is also important because industry in general consists of small plants, (91 per cent of all industries have less than five hundred employees each).

Method of Setting Standard

When time studies are used as the basis for standard setting, two methods may be used. One method establishes the standard directly by summarizing the individual time study. The other determines the standard somewhat indirectly through the use of standard data. Let us start with the direct method of setting standards to create a contrast with which to compare the Standard Data procedure.

Experience has proved that the direct method should be used only in very rare instances, because the standard thus determined contains all the irregularities in work specifications, operator methods, and time study judgment.

Those who follow Taylor's principle of correcting working conditions before taking the time study or setting the standard, know the extent of variation that might creep in between isolated studies taken on the same operation at different times.

Those who concentrate on motion study and analysis, are well aware of the variations that exist between several operators on any given operation, which would again be reflected in standards determined from individual studies.

These differences are quite apparent when brought to your attention at one instant. They are just as real as described, but not nearly so obvious in actual practice, because they are buried in the day-to-day procedure over a long period of time, with changing working conditions, operators, and products. If the methods and conditions are perfected before the study is taken and the motions standardized, there is still the element of varying judgment included in the individual time study standard.

In order to bring out clearly what may happen in this part of the process, the "humanics" of the study, prepare an exhibit from five or six time studies of one element of an operation taken at as many different speeds of performance, and then analyze these to establish a correct standard. There are a number of schools of thought followed in an endeavor to determine which of several watch readings is the correct one to select. If the process used is a mathematical one, you are sure

to arrive at the WRONG answer in many instances because a mathematical procedure will be definitely related by proportion to the average value. Human beings do not work by mathematical relationships.

Rating Time Studies

The simple example suggested above will demonstrate that the time which occurs the most often, the average, the minimum or any proportional gradation in between will be incorrect in all except a study rated at normal performance. Any method of selection would attempt to arrive at the same standard from all of the studies selected. How can it be done? By judgment alone, unaided (or more correctly described as unhampered) by any mathematical process. To obtain the correct standard, it is necessary to rate each time study as it is taken, in terms of some normal that will furnish the factors to convert them all to the same common denominator. Without rating, the time study man cannot gain consistency between individual standards not to mention the variations in incentive possibilities as between departments.

Even when time studies are correctly rated within the range of probable error, there are the disadvantages of inconsistency resulting from the use of the direct method. But there are other important reasons for not using that method. The direct method rarely puts on standard anything like all of the operations, so that the benefits of incentive are lost to both the operators and the management. Many types of non-repetitive work cannot be touched at all because the standard cannot be predetermined. Standards are much more costly. They take entirely too long to prepare.

Cost of Direct vs. Standard Data Method

To compare the relative time and cost involved, let us assume a hypothetical case requiring the establishment of 2500 total standards for the same department by the two methods.

A good time study man can set from two to ten standards per day by the direct method, but let us suppose that the average is five per day. To obtain the 2500 total for 100 per cent coverage, it would take three men working five days per week, a period of thirty-three weeks to complete the assignment.

By the standard data method a good standard setter can determine from twenty-five to forty per day. Assuming twenty-five per day as an average figure the same 2500 would require seven weeks to complete after

the data had been assembled. Assume that four weeks would be required for this set-up period. Even if two months were taken, the job would be completed in four months instead of eight. That gain in time is worth a lot when considering the benefits derived.

Now let us compare these two methods on a cost basis. Assuming fifty-dollars-a-week time study talent, the time study direct method of application would cost \$5000 to complete. Each standard would cost two dollars with no provision made for revisions.

By the standard data method, the data plus the 2500 standards is obtained for a total of \$1600. Each standard costs sixty-four cents instead of two dollars. And any new standards or revisions can be made from the data at a cost of 40 cents each.

These two illustrations assume 100 per cent coverage which is, of course, incorrect. However, it is not at all unreasonable to expect better than 95 per cent coverage by the data method. On most of the applications of the direct method an average of about 40 per cent of the total time worked by producers is measured.

Standard Data Method

With that picture of the direct method in mind and its irregularities and high cost, let us look at the standard data method, which at the outset is slower because no standards whatever are determined while the data is being compiled.

The standard data process starts by recording the time studies on a comparison sheet for convenience in comparing variables and analyzing conditions. The design of the sheet is unimportant except that it should be large enough to contain a great many studies. The elements may be listed vertically on the left side, and the study results entered opposite, using one column for each. Standard times only are recorded because they are the only ones that are comparable. Work and conditions are recorded at the top to eliminate repeated handling of the studies. The variables can be analyzed from this sheet, and the constants selected directly.

The conclusions reached from this comparison of time study results may be recorded in a column next to the element names. Constant time standards are recorded there. Notes are made of curves and charts established for the variables. More will be said about the treatment of variables later. The important point to be registered here is that by the use of this sheet which brings many studies together, the time study man is

forced to account for the variation between times that may be due to any of the causes previously mentioned, and to analyze for reasons, with the result that consistency will inevitably be established between the points in a range of values. One, and only one, value will be determined for a certain constant.

Use of Charts

Standard data having been established, we progress toward its application for standard setting purposes. To lessen clerical work, and in so doing, lessen errors, the data is combined. The ideal solution is that in which it is possible to pick off one value from a chart that takes account of all the variables.

The first step in consolidation is the combination of related elements by groups as they are performed. It is logical to add together constants or variables that always occur because of each other, even when it is necessary to make numerous combinations to include all of the commonly used groups. These group standards are then recorded for ready reference or further combined when the specifications governing their application can be arranged to indicate automatically the proper total.

Completed standard data may take on a wide variety of forms. The variations should not be caused by the lack of knowledge of the time study man in the art of presenting the information. They should arise from a proper analysis of the problem of standard setting for the work at hand with the data of a given type.

A problem that involves many constants which may or may not be used, can take on the final form of a list wherein only the opposites like "put and take" are combined, especially if the data is to be applied to fairly large quantity production where accuracy is important. The standard is determined by selecting and recording in columns provided, the elements applicable along with their multipliers.

At the other extreme, is the ideal solution, that which combines all the data considering the variables, so as to furnish the final answer as one figure. Sometimes it is necessary to make some such chart in order to obtain the standards inexpensively because only one piece of a kind is made. In this case, the standards would not even be recorded. Obviously it would be much cheaper to set a new one than to look up the standard in a file, should a design ever repeat. This solution is called ideal because no other clerical work is required except to write the standard on the work order, and no errors are made in arithmetic. No necessary elements can be

omitted nor are any superfluous elements added. The only opportunity for error arises through the incorrect use of the chart.

Advantages of Standard Data

It should be self evident that barring clerical errors, the standard setter can obtain a standard economically and correctly from data that is properly arranged. Therefore, it should be possible to measure types of work that are neglected in many plants because time study costs too much. The standard can be given to the operator before the one piece orders get into production, permitting the use of incentive in its true sense. Standards determined in this manner will be consistent with each other, and assuming no clerical errors, always be the same for a given set of conditions. As a result, a common denominator for business controls is present when the production is measured in terms of standards thus established.

Consistent standards can be obtained from correctly designed charts that approach the acme of perfection in time study work, but there is more to that than appears on the surface. If a good job of standard setting is to be done, consistency must be attained first. Consistency is even more vital than accuracy. Standard data offers the best means for accomplishing that end with the knowledge we have today. Then there must be low cost per standard if the bulk of the work is to be measured and the maximum benefits of incentive made available to an organization. Again, it would appear that standard data offers the most economical means for obtaining these ends. It is here that we should go further.

The lowest cost per standard varies with local conditions. The cost is made up of: first, the dollars expended to secure the basic data; second, the dollars spent to arrange that data in convenient form, and third, the cost to determine each new standard. One other important variable affecting the cost is the quantity of standards to be set. Also neglect of simplification and the expenses of recording and keeping up to date whatever records may be needed may increase cost.

Those who are familiar with machine shop practice will visualize the problem when it is compared with the decision that must frequently be reached as to when will the work be done on an engine lathe, a turret lathe, or on the automatic. There are different set-up standards, and piece times, which when related to quantity indi-

cate when to change method. Returning to standard data, the idea to be stressed is the importance of form in which the results of time study may be arranged, considering the cost of the arrangement (set-up) and the cost per standard (the piece time).

Types of Charts

Standard data may take many single forms, or combinations of them. Because it should be the desire of the time study engineer to be as efficient in his own department as he expects the shop to be in manufacturing, he should equip himself with the knowledge to determine properly which form of standard data will most economically furnish the standards on all of the work to be measured. That entails considerable study. Not many have devoted to this and other phases of time study work the amount of study required to qualify as an engineer the same as an electrical, mining, chemical or mechanical engineer. If one wishes to be classed as an engineer, and not as a clerk, as the editorial suggests, he may have to do some more work.

To review the possibilities of form design, the six commonly used methods of presenting the variables involved in standard data will be described briefly. These might be divided into two groups described as simple and complex. Of course there is a large degree of interchangeability, but let us call "simple" those forms which present one or two variables. "Complex" would then include three or more variables.

In the first class are:

1. Curves which are frequently determined automatically in the process of analyzing the variables. Many time study men stop with these as the final result. One should stop there when that is the most economical answer but not because of limitation in skill.

2. The data shown on curves may be reduced to tables. Many use this form of record because it is made up of definite numbers as opposed to curves or equations with their infinite possibilities.

In the interchangeable group are two commonly used forms.

3. Some schools of training urge the use of equations. They furnish the most mathematically accurate answer, but are expensive to use. They have a definite field of application but one which is not nearly so broad as its sponsors indicate.

4. Many time study men like the alignment chart. It is a good form for combining variables, easy to con-

struct, but somewhat expensive to operate. Its chief limitation lies in the difficulty of design when the solution requires some combination of addition and multiplication. In the construction, a line correctly graduated is substituted for variable.

5. In the complex group one would ordinarily place the family of curves and the multi-variable chart.

6. Simple curves are often superimposed upon each other to obtain the family of curves. The construction of this form is comparatively easy. It would be expected therefore, that by comparison the cost per standard would be higher. This form has a definite place in time study work but the engineer should remember that it compounds the shortcomings of the simple curve, namely, errors in reading and that bug-bear, interpolation.

7. Tabular data may be arranged to combine a number of variables. Considerable ingenuity and time are needed, but unless reasonable areas are exceeded, one may conveniently combine six to ten variables. Many more have been consolidated in one chart when most of the variables entered into each solution. Tabular data has the advantage over that represented by lines, in two particulars. First, the standard is shown as a positive number with the decimal point correctly located. Also, there is much less chance for error, and no opportunity for interpolation, that waster of time and creator of inconsistency.

Time study engineers, it seems to me, should become thoroughly familiar with this phase of work in order to operate departments with the lowest possible cost per unit of standards department production, considering the percentage of work measured and the number of standards set.

Range of Standard Data

The Standard Data method has been applied to every type of industry in which time is an essential manufacturing factor.

The data created to set standards are used to prepare estimates on new work, so that upon receipt of customer's order, the standard may be used for wage payment, modified only for changes in specification. This takes the "guess" out of estimates.

When the direct method is used for visual operations, like inspection, or operations like rubbing, polishing, etc., wide variations exist due to differences in operator's judgment as to quality. Standard data is invaluable here, since all jobs are related to the standard performance, thereby insuring uniformity and consistency.

Attaining the Higher Purpose

In conclusion, let me remind you that the editorial which furnished our text inferred that correctly executed time study work required men of a higher type than is generally included by the term "clerk."

The editorial further said that time study has a higher purpose. To attain at least one of those purposes, namely, better control, you must correctly measure practically all of the productive effort to obtain a proper denominator. Complete measurement, however, is not enough. You must have consistency, because it is more vital than accuracy.

These objectives must be attained economically, and at the same time meet all of the rigid specifications of equitable incentive.

I trust that this brief explanation of the practicality of standard data has shown that it offers the best means of accomplishing the desired objectives with the knowledge we have today.

Book Review

(Continued from page 17)

implemented with scientific techniques, by good practice and by skillful management. The viewpoints throughout the book are progressive, fair and practical.

The old idea that the employer has the absolute and arbitrary control of industrial relations, is compared to the "divine right" of kings. Ideas of industrial freedom follow closely the advance of political democracy. Besides the general trend in personal attitudes, "Modern organization, distressingly lacking in the intimate personal relation of simpler stages of economic development, urgently needs some form of joint control which will bring management and men closer together."

Although moral responsibility should be the deciding issue in all dealings on the part of either employer or employee, the aim

in all relationships is for mutually profitable results. Experiences of many successful companies are cited constructively. The volume thus contains a valuable combination of principles and of methods for handling personnel. There is balance in the treatment of the wide range of topics, but occasionally one wishes for a more complete discussion of some subjects, such as Individual Production Rating, Mediation and Group Hospitalization.

The final chapter, called Part VII, is an evaluation of personnel management. The advantages of better labor relations are restated, and some apparent directions of progress are indicated. By JOHN C. SHOVER, Personnel Officer, Farm Credit Administration, Omaha, Nebraska.

Market Research as an Aid to Management

By S. J. KENNEDY

Market Research, Pacific Mills, New York

Address presented at the Annual Meeting of The Society for the Advancement of Management, December 10, 1938.

THE distribution process offers many opportunities for the application of scientific management principles. These arise not as in the case of manufacturing operations within the plant as adjustment, co-ordination and control of the internal organization of the company, but from the imperative necessity for effecting an external adjustment of the company to its markets.

Within the past decade or two the need for scientific analysis of markets has grown much more acute. Before the war the problem was quite simple. Our population was expanding rapidly and the domestic market growing even faster. Consumer tastes were not particularly discriminating and by and large there was insufficient producing equipment in the country to meet the needs of the market. You simply made what you wanted to make and consumers took it. I always think in this connection of a Yankee textile manufacturer who made a certain type of goods for which the market was drying up from under him. His selling agent tried to suggest tactfully to him one day that he change his product and start making something for which the market was firmer. In a fine display of resentment he stormed, "the very idea, trying to tell me how to run my mill. That mill has made these goods for sixty years and that is what it's going to make."

Today business is too competitive for anyone to take such an attitude; producing capacity has the potentiality of growing so much faster than its markets, productive efficiency is ever so much greater, that one just can't afford to be wrong.

It is in this adjustment of the concern to its markets that management must make its most far-reaching decisions as to policy. These decisions necessarily must be based upon some forecast of trends in the markets in which the concern intends to sell its products. Such forecasts may be either formal or informal—that is, the result of conscious directed analysis of the markets

and the trends within them, conducted by a market research or planning department, or simply a hasty qualitative appraisal of the situation by the head of the firm based upon reports from the trade. For small highly flexible concerns where the organization revolves around one or two men, the latter type are usually adequate, for they deal not with large aggregates of demand but with small specialized sectors where a person can readily keep his fingers on the pulse of the market. With larger organizations operating either on a large scale in a limited number of markets, or broadly over a wide range of products, definite assignment of responsibility for this work as a staff function becomes necessary if it is not to be overlooked.

In arriving at these forecasts of trends in various markets, where diverse forces are at work, the data with which the market research analyst must work are seldom adequate. Even if they are fairly complete, the situation is always changing so rapidly that what is true today may not be true at all three or six months from now.

The possibilities for conducting definite scientific tests of reaction are a great deal more limited in the field of distribution than in manufacturing. In the plant the engineer can test directly by experiment what effect a change in materials or in machinery will have. Thus if a new dyestuff is brought out he can arrive definitely at information as to its usefulness and as to how it should be applied. The distribution engineer cannot know, however, with similar precision if that particular color or shade will sell to consumers, or on what fabric or weight of fabric it will sell best. Yet that is just what he must decide.

There are basically two types of market research: merchandise research, the study of consumer reactions to specific merchandise, either before or after it is launched on the market; and the study of market aggregates, the statistical or quantitative analysis of industry

data showing trends within the market, changes in its technical position or that of the trades it serves.

Today we realize that the merchandising requirements of any product are those imposed by the consumer. Most companies have somewhere in their planning organization someone consciously endeavoring to shape product so that it will be the type of goods they believe consumers will want. These merchandising requirements will not be something fixed, but rather continually fluctuating. With the enormous variety which the flexibility of our industrial processes makes possible and the constant broadening of public taste, it becomes increasingly more of a problem to determine what consumers actually do want, or will want by the time the product is ready for delivery to them.

This problem is not the same, of course, for all industries. In some cases the information available to management about markets and trends within them may be greatly increased by the firm's controlling the entire series of manufacturing operations down to the final distribution to the consumer. Shoe manufacturers, for example, not only perform the entire manufacturing operation, but also in some instances control chains of retail stores. This places them in an ideal position for knowing what the market wants. Market research for such completely integrated organizations consists in large measure of closely studying the buying habits of the income groups in the various cities in which their stores are located, how they respond to style changes, how much they can afford to spend for shoes, how often they purchase them, and so on: a typical retail type of market analysis, such as might be conducted by any retail merchandise manager for one store or a chain of stores. Such findings must, of course, be related back to the producing organization, and interwoven into the merchandising and manufacturing plans. But that is a much simpler task here than it would be if there were not this close relationship to the market.

This is one distinct and rather simple type of merchandise research—simple because the manufacturer can reach directly into his market, and sample and analyze to his heart's content, experimenting and testing out new ideas on the exact clientele for which he produces. That is true in a general sense of the entire retail field. Every store buyer is continually conducting market research—usually quite informally, of course, because he tends to keep no records except mental ones—until, if he is successful, he comes to have a fairly clear idea of what will and what will not sell in his market.

Yet even in a situation where the manufacturer can reach into his consumer market and make direct analyses, the problem is complicated for him by variety in consumer taste and the impact of style.

The shoe manufacturer for example can tell pretty well what proportion of the different sizes he should make, for his planning department has information on past performance, past orders, and vital statistics about the proportion of people of different ages in the population and so on. But how is he to know if on this particular model of a woman's shoe he should use a buckle or a clasp, and if the former, if it should be made from rhinestones or green enamel, or if it should be round, oval shaped, oblong or square. Obviously he cannot make them all. You see he is up against the dilemma of style—a factor of importance in some form or other in practically every phase of consumer goods manufacture.

What is needed here is detailed study of consumer wants and trends and of how to influence consumers to buy what you finally decide to make. Who sets these trends? There are many sources. In textiles alone there are a half dozen different points of origin, although the best known and most widely publicized is that for women's apparel which, whether we like it or not, derives its style inspiration from Paris. Forecasting these trends in style or fashion constitutes a major and unavoidable part of the task of determining the style requirements of consumer goods. It must be done months in advance of the opening of a season, and whether it is women's dresses or washing machines, these trends exist, and without help in determining them, the works manager or the planning department will be helpless in designing the product and in keeping the plant running when the product goes on sale.

The one important characteristic of this process of determining consumer requirements which a person of an engineering type of approach should not overlook, is that the principles and methods which apply in the field of merchandising are of a radically different character than those which apply in fields of activity based upon the exact sciences. Here we are only in part dealing with objective realities—things which can be measured precisely once and for all, which can be subjected to analysis with the aid of formulae and units of measure. Merchandising deals fundamentally with subjective values—values which some consumer will place upon an article at some given time and place. This value may or may not be related to the "intrinsic" value of the article, using that term to mean its cost of production.

Those engaged in merchandising accordingly study human reactions, and their decisions are based upon their observations and forecasts of how people will react. They act as much from intuition as from reason. Great leaders of fashion, the couturiers of Paris, for example, act intuitively. They are artists finding a medium of expression for their artistic sense in fashion. This approach to style from the intuitive rather than the analytical side follows down through the whole field of industry where style crops out. It must, therefore, be realized that creativeness, which is as essential to success in many industries as production itself, is not something to be standardized according to principles, but something requiring full sweep of the imagination and an intuitive approach. It is the task of management to harmonize this creative aspect of industry with what it can find out about its markets, and with its producing capabilities.

The range of products for which market research of this type is conducted is, of course, very great indeed. It includes *all* products at the stage where they can go into the distribution channels for sale to ultimate consumers.

There are, however, large groups of merchandise which are sold not to ultimate consumers, but to industrial users who may further process them, or consume them in the process of making some other product. Here we have industrial markets, as contrasted with consumer markets.

There is not a great deal of information to be found about market research in industrial markets. For one thing there is little that can be said about one market that will apply to others. In consumer markets one is dealing with the same group of individuals in a given community, or trading area, regardless of whether he is trying to sell them toothpaste or radios. But in industrial markets the trades for two such closely related products as a printed fabric with a stripe and the same fabric printed with a little flower are totally different; one goes to the men's shirt trade and the other to the children's dress trade. You see what the manufacturer is up against. The market in which he is trying to sell in one case consists of 125 shirt manufacturers and in the other of 75 entirely different children's dress manufacturers.

Where the manufacturer has no direct contact with consumers, but sells his product to other processors who add a touch of some kind to it and pass it on to still others for final processing, the determination of market demand is much more difficult. In markets like

these, two or three stages removed from the consumer, the planning or forecasting function may be turned over to some outside agency for study, someone who specializes in the analyzing of markets, not simply for one firm but for many. This is where the great group of consumer research organizations comes in, of which the advertising agency is by far the most important. Their whole success depends upon their ability to determine what makes consumers buy, how to reach them, and how to influence them to buy a specific product.

So far I have sketched the task of merchandising research—that task of management of finding what consumers want in the given market for which the firm is producing, so that these consumer wants can be translated into terms of what the mill can turn out, and the mill organization be adjusted to its market.

There are other interesting aspects of market research. One which I must mention is the study of the markets themselves, of their trends, both in the long run and in relation to cyclical movements. Take the case of inter-fiber competition. Here we have some six or eight different textile fibers which are competing among themselves, most of them usable within certain limits for the same consumer uses. Constant shifts in consumer favor are taking place between them, yet each is produced by different machinery and even by different industries. You can readily see how vital it is to know how these shifts are occurring.

Similarly there is the broad competition between different products for the consumer dollar. Thus if a family buys a new car, it is quite likely that purchase of certain other items of durable consumer goods may have to be curtailed or abandoned. Likewise shifts in consumer habits create a difference. Today, for example, a substantially smaller part of the family income goes to textiles than it did in 1910 when women's intimate wear both in quantity and dimensions was adapted to Currier and Ives winters rather than to well-heated homes, offices and subway cars.

Without going further into this fascinating field of market research, it should be clear how important a tool of management it can be. Its proper employment is a necessary part of planning which in turn can be placed at the head of the list of the logical divisions of the management function. It is of course only one phase of management, but it is perhaps more important to see where and how one unit of an organization applies the principles of management than to cover in a short space the entire field, which I believe you will all agree is practically limitless.

BOOK REVIEW

The Income Structure of the United States. By Maurice Leven, The Brookings Institution, Washington, D. C., 1938, pages x, 177. (\$1.50.)

In this volume Mr. Leven has summarized and synthesized a great mass of material assembled by the Brookings Institution in making their four-volume study of "The Distribution of Income in Relation to Economic Progress." Although the volume is small and brief, it is a veritable gold mine of detailed information made quickly available by the use of numerous charts, tables, and graphs, accompanied by only the necessary minimum of supplementary explanation.

One chapter deals with occupational differences in income (see graph, p. 17). On page 26 is a bar diagram representing average dollar income in 88 separate occupations. Industrial differences in income are shown on page 37 and geographic differences, pages 40-46.

One of the most interesting and instructive sections is on "Age, sex, and color as influences on income." (p. 47 ff.) Some attention is given to the way in which income is affected by group action, attention being given to industrial groups, farm groups and labor groups. Here we find an interesting sidelight on a final repercussion of craft unionism vs. industrial unionism. So long as unionization was limited to a few million skilled craftsmen, their high wages were probably "at the expense" of the rest of the population, since high wages for these few were not of sufficient magnitude to affect the general level of costs. "With the advent of industrial unionism and its complete unionization of all workers, including salaried employees, the situation is changing. What will it mean to the income structure when all respond and all succeed in raising money incomes through collective bargaining?" (p. 76)

We also find here a discussion of variations in income due to the "ebb and flow of business" whether in the form of a business cycle, industrial disputes, or technological progress.

In dealing with wages since 1929 the interesting observation is made that whereas *real* hourly earnings had gone up since 1929, and cost of living had gone down, yet total annual wages paid in 1936 were still below that of 1929. This is perhaps convincing evidence that the gains by the employed were more than offset by the losses of those still out of a job. Therefore, some suspicion may be cast on the validity of the "high-wage-purchasing-power theory." May there not be an "uneconomic high wage" that fails to get labor sold? After all, it must not be forgotten that the *wage* problem is a *price* problem, and if the price is too high it fails to equate demand and supply.

By way of final comment we may say that it is not a book in economic theory. The author states that "the purpose of the present study is to contribute toward the clarification of thought in the important field of income and its distribution. No attempt will be made to say anything essentially new. Rather, the effort will be directed toward pointing out some simple—and what may appear obvious—truths relating to the income structure and the statistics pertaining thereto." (p. 1)

The reviewer believes that the author was more successful in giving a statistical picture of the income structure than in "the

clarification of thought." For example, the author recognized the dilemma faced when attempting to deal with individual incomes and incomes from the national point of view. He followed the customary procedure of discovering and stating individual incomes in monetary terms; he then totalled the sum of individual incomes and automatically discovered the national income. Yet, from the national and collective point of view, national income increases only as production increases the volume of goods available for a higher standard of living. Individual incomes, on the other hand, may be increased by one of two techniques—the competitive technique of efficiency and increased volume of goods, or the monopolistic technique of scarcity and higher dollar income through output restriction.

It occurs to the reviewer that Leven is somewhat remiss in neglecting this point in a work appearing in 1938. Labor has been seeking an increase in individual and group incomes by decreasing the supply of labor and increasing the price (agitation for the six-hour day, five-day week and minimum wage). The government has attempted to increase the income of farmers by reduction in supply and an increase in price. Industry, through trade associations and various forms of "Pittsburgh Plus," has organized to keep quotas low and prices high. To some extent at least these efforts have succeeded in raising the individual incomes of the groups affected. But one would have to be naive indeed if he believes that national income was increased through organized scarcity and higher prices. Yet Leven does not concern himself with this problem. He has made a statistical, inductive study, starting with the dollar income of individuals and moving on to dollar incomes of groups and finally to the nation. Because of the scarcity technique developed in recent years to increase dollar income at the expense of national income (in commodities and services available for consumption) and because Leven avoids this basic income problem, we do not feel that he carried out successfully his purpose "to clarify thought." By H. L. McCracken, Head, Department of Economics, Louisiana State University, Baton Rouge.

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